

Title (en)

IMPROVED SHUTTER SLAT END RETENTION SYSTEM

Title (de)

VERBESSERTES SYSTEM ZUR HALTUNG VON VERSCHLUSSLAMELLENENDEN

Title (fr)

SYSTÈME AMÉLIORÉ DE RETENTION D'EXTRÉMITÉ DE LAMELLE D'OBTURATEUR

Publication

EP 2029850 A4 20130710 (EN)

Application

EP 07809235 A 20070530

Priority

- US 2007012718 W 20070530
- US 44500506 A 20060601

Abstract (en)

[origin: US2007277939A1] An end retention system for a rolling shutter system is provided. The end retention system comprises a fastener that has a head and a shaft, and a washer that has an outer diameter and an aperture having an inner diameter. The inner diameter of the aperture of the washer is at least twice the diameter of the shaft of the fastener. The shaft is configured for insertion into a screw boss receptacle of a shutter slat. The end retention system may also comprise a guide track that has retention fins spaced apart a distance that is less than the outer diameter of the washer. The guide may include a channel that partially bounded by the retention fins. The channel may have a width that is greater than the outer diameter of the washer. The washer is located in the channel, and is retained near the slat by the head of the fastener.

IPC 8 full level

E06B 9/15 (2006.01); **E06B 9/58** (2006.01)

CPC (source: EP US)

E06B 9/15 (2013.01 - EP US); **E06B 9/581** (2013.01 - EP US); **E06B 2009/1588** (2013.01 - EP US)

Citation (search report)

- [X1] US 6755231 B1 20040629 - BIGGERS DOUGLAS W [US]
- [XA1] US 2003024659 A1 20030206 - BEGNI RODOLFO [IT]
- [A] US 5839493 A 19981124 - QUASIVUS JAMES R [US]
- See references of WO 2007142953A2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

US 2007277939 A1 20071206; US 8616261 B2 20131231; AU 2007254992 A1 20071213; AU 2007254992 B2 20140123; CA 2654001 A1 20071213; CA 2654001 C 20150113; EP 2029850 A2 20090304; EP 2029850 A4 20130710; WO 2007142953 A2 20071213; WO 2007142953 A3 20081106

DOCDB simple family (application)

US 44500506 A 20060601; AU 2007254992 A 20070530; CA 2654001 A 20070530; EP 07809235 A 20070530; US 2007012718 W 20070530